Ruckus
Simply Better Wireless.

data sheet

BENEFITS

Ultra high density client support
Support for over 500 concurrent clients

High speed client performance with integrated 30º narrow beam array
Patented BeamFlex technology limits client contention to maximize user performance

Light, slim design for easy deployment
Compact, lightweight design with integrated antennas provide flexible deployment options with quick and easy installation

Onboard GPS receiver for location services
Integrated GPS receiver automatically populates each AP with GPS coordinates

Predictive channel selection for increased capacity and reduced interference
ChannelFly automatically selects the best performing channel based on statistical, real-time capacity analysis of all RF channels

Integrated AC and PoE power in and out
Easy installation on light poles and the ability to directly power devices such as small cells

Unmatched Wi-Fi capacity and reliability
BeamFlex delivers up to 7 dB of added signal gain and up to 15dB of interference mitigation

Enhanced receive capabilities
Support for signal polarization diversity with maximal ratio combining (MRC) ensures reliable connectivity for mobile devices

Integrated Smart Mesh backhaul
Resilient and high speed mesh links between APs reduce the need for expensive fiber and microwave alternatives to simplify deployment

ZoneFlex™ 7782-N

30 DEGREE NARROW BEAM SMART WI-FI OUTDOOR AP

The Industry's Highest Capacity, Highest Performing Access Point for Extreme, High Density Wi-Fi Deployments

The ZoneFlex 7782-N is the first dual-band 802.11n outdoor access point (AP) designed explicitly for very high density user environments such as stadiums, arenas, train stations, convention centers, and major metro areas.

The ZoneFlex 7782-N is the only AP on the market to integrate patented BeamFlex™ technology and chip-based transmit beamforming (TxBF), combining these technologies with a 30º narrow beam adaptive antenna array to deliver up to 7 dB of signal-to-interference-plus-noise (SINR) improvement above the antenna gain and up to 15 dB of interference mitigation. This enables much longer range signals and more resilient mesh connections that adapt to interference and changing environmental conditions.

In addition, the ZoneFlex 7782-N uniquely leverages a predictive model for channel selection (ChannelFly) that uses actual activity to learn what channels will yield the most capacity to provide the highest client speeds and reduce interference.

Designed for easy installation within an ultra lightweight and low profile enclosure, the Ruckus ZoneFlex 7782-N is ideal for venue owners looking to quickly and economically deploy Wi-Fi in high-capacity environments such as stadiums, arenas, train stations, convention centers, and major metro areas. Using a very narrow and focused beam, the 7782-N APs can be deployed in close proximity, mitigating co-channel interference. This is critical as high density deployments require a large number of APs within a fixed space.

The ZoneFlex 7782-N can be centrally managed by the ZoneDirector Smart WLAN controller or the SmartCell™ Gateway 200 (SCG 200) as part of a unified indoor/outdoor wireless LAN, deployed as a standalone AP and managed individually, or through the FlexMaster remote Wi-Fi management system.

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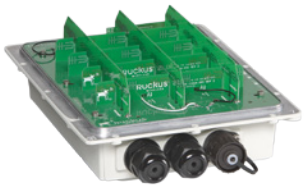
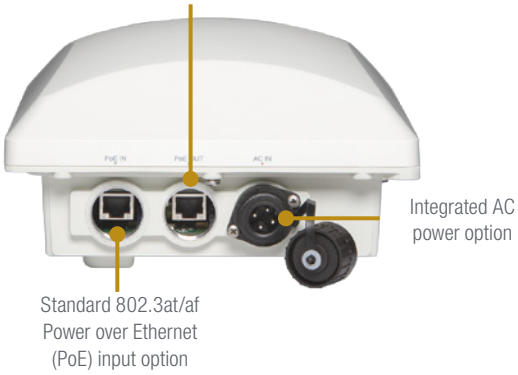
ZoneFlex 7782-N

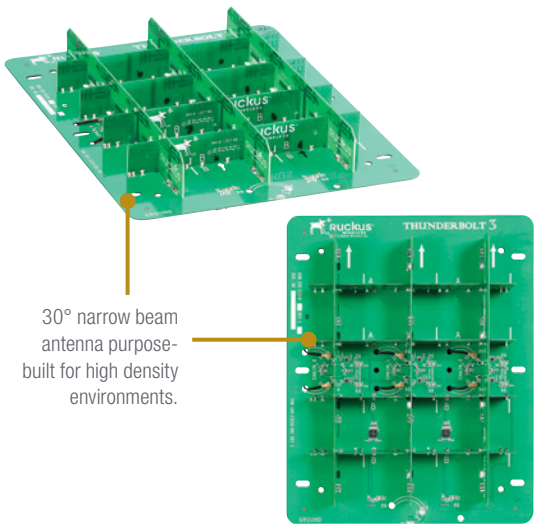


Dual-band802.11n 2:2x2, 600 Mbps

Internal narrow beam smart antenna for 2.4GHz and 5GHz 4 elements, 30° narrow sector coverage

- Well suited to extremely high-density deployments
- Can be used in point-to-point bridging applications
- Best coverage and capacity at 30°


802.3at/af Power over Ethernet (PoE) output for metro picocell base station
Integrated AC power option
Standard 802.3at/af Power over Ethernet (PoE) input option



FEATURES

- Concurrent dual-band (5GHz/2.4GHz) support
- Adaptive antenna technology and advanced RF management
- Up to 7dB signal gain / 15dB interference mitigation
- Chip based transmit beamforming increasing signal gain up to 3dB when used with supported clients
- Automatic interference avoidance, optimized for high-density environments
- PoE output supports up to 25 Watts to power small cells, surveillance cameras
- Polarization diversity for optimal mobile device performance
- Integrated AC power
- IP-67 rated, -40°C to +65°C
- Integrated GPS for location services
- Wall, pole or ceiling mountable
- Small, lightweight, and sleek form factor
- 2 to 4 times extended range and coverage
- Multicast IP video streaming
- 600 Mbps of user throughput (300Mbps/radio)
- 32 BSSIDs with unique QoS and security policies
- Auto packet classification and priority for latency-sensitive traffic
- Standalone or centrally managed by ZoneDirector, SCG 200, or FlexMaster
- Spectrum analysis
- Dynamic, per-user rate-limiting for hotspot WLANs
- WEP, WPA-PSK (AES), 802.1X support for RADIUS and Active Directory*
- Smart Mesh Networking*
- Zero-IT and Dynamic PSK*
- Admission control/load balancing*
- Band steering and airtime fairness support
- Captive portal and guest accounts *

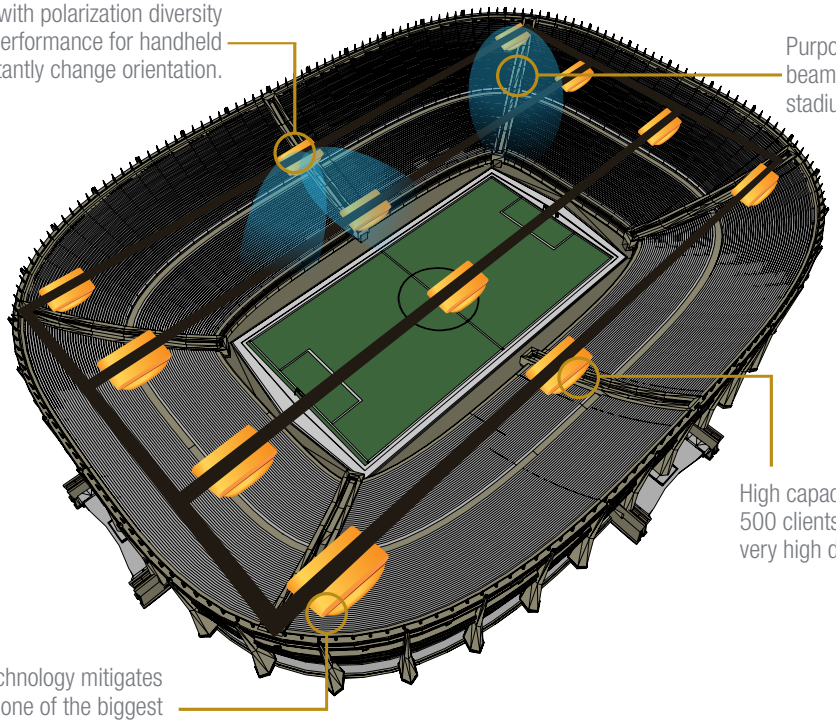
*When used with Ruckus ZoneDirector controller

ZoneFlex™ 7782-N

30 DEGREE NARROW BEAM SMART WI-FI OUTDOOR AP

7782-N with polarization diversity optimizing performance for handheld clients that constantly change orientation.

Purpose-built 30° narrow beam AP for very high density stadium environments.



High capacity AP supports up to 500 clients are purpose built for very high density environments

Adaptive antenna technology mitigates inter-cell interference, one of the biggest challenges in high-density deployments

Protective vent to equalize pressure

11.8 cm (H)

19.5 cm (W)

23.9cm (L)

Mounting points

AnyAngle mounting bracket for quick and easy installation

LED status indicators

Specifications

PHYSICAL CHARACTERISTICS	
POWER	**AC Input** • Idle: 8W • Typical: 10W • Peak: 18W (PoE output off) • Peak: 50W (PoE output 25W) **PoE Input** • Idle: 6W • Typical: 8W • IEEE 802.3af/at
PHYSICAL SIZE	• 23.9 cm (L), 19.5 cm (W), 11.8 cm (H)
WEIGHT	• 2.4 Kg
ETHERNET PORTS	**PoE Input** • 10/100/1000Base-T 802.3, 802.3u, 802.3ab, 802.3at/af PoE PD Input up to 44W with high power PoE injector • Jumbo frame support* (2000 byte MTU) **PoE Output:** • 10/100/1000Base-T 802.3,802.3u, 802.3ab, 802.3at/af PoE PSE Output up to 25W • Jumbo frame support (2000 byte MTU) • PoE power out powered with AC in or 60W PoE injector

RF	
ANTENNA	• 1 pattern
MAXIMUM EIRP	• 38 dBm (2.4GHz); 42 dBm (5GHz)
PHYSICAL ANTENNA GAIN	• 12 dBi (2.4GHz); 4 dBi (5GHz)
BEAMFLEX* SINR RX GAIN	• Up to 4 dB
INTERFERENCE MITIGATION	• 15 dB
MINIMUM RX SENSITIVITY	• -101 dBm (2.4GHz); -96 dBm (5GHz)

NOTE: BeamFlex gains are statistical system level effects translated to enhanced SINR based on observations over time in real-world conditions with multiple APs and many clients

PERFORMANCE AND CAPACITY	
HIGH DENSITY UDP THROUGHPUT	• 125 Mbps (2.4 GHz) • 244 Mbps (5 GHz)
CONCURRENT STATIONS	• 500
SIMULTANEOUS VoIP CLIENTS	• Up to 30

MANAGEMENT	
DEPLOYMENT OPTIONS	• Standalone (individually managed) • Managed by ZoneDirector • Managed by FlexMaster • Managed by SmartCell™ Gateway (SCG 200)
CONFIGURATION	• Web User Interface (HTTP/S) • CLI (Telnet/SSH), SNMP v1, 2, 3 • TR-069 vis FlexMaster

WI-FI	
STANDARDS	• IEEE 802.11a/b/g/n • 2.4GHz and 5GHz concurrent operation
DATA RATES	• **802.11n:** 6.5Mbps – 130Mbps (20MHz) 6.5Mbps – 300Mbps (40MHz) • **802.11a:** 54, 48, 36, 24, 18, 12, 9 and 6 Mbps • **802.11g:** 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
RADIO CHAINS	• 2 x2: 2
RF POWER OUTPUT	• 26 dBm (2.4GHz) / 24 dBm (5Ghz)**
FREQUENCY BAND	• IEEE 802.11n: 2.4 – 2.484 GHz and 5.15 – 5.85 GHz • IEEE 802.11a: 5.15 – 5.875 GHz • IEEE 802.11g: 2.4 – 2.484 GHz
BSSID	• 32 per radio (64 per AP)*
ADVANCED RADIO FEATURES	• BeamFlex Adaptive Antenna Technology • TxBF, LDPC, and ML receiver • GPS • Spectrum Analysis*
WIRELESS SECURITY	• WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i • Authentication via 802.1X, local authentication database, support for RADIUS and ActiveDirectory
CERTIFICATIONS	• U.S., Europe, Australia, Brazil, Canada, China, Egypt, Hong Kong, India, Japan, Korea, Malaysia, Mexico, New Zealand, Philippines, Singapore, South Africa, Taiwan, Thailand, UAE, Vietnam • WEEE/RoHS compliance • Wi-Fi Alliance Certification (Wi-Fi Certified™)

* Future release ** Maximum power varies by country

Product Ordering Information

MODEL	DESCRIPTION
ZoneFlex 7782-N Outdoor Access Point	
901-7782-XX61	7782-N: ZoneFlex 7782-N 802.11n Outdoor Wireless Access Point, 30 degree Narrow Sector 2.4GHz/5GHz antenna. Includes mounting kit, 1 year warranty. Does not include PoE Injector. Does not include AC Power Cord.
Optional Accessories	
902-0180-XX00	60W Power over Ethernet (PoE) Injector (10/100/1000 Mbps) quantity of 1 unit US Plug
902-0182-0003	Spare, Outdoor Mounting Bracket, Bare Metal, Any-Angle
902-0183-0000	Spare Data Connector for contains 1 weatherizing data cable gland
902-0185-0000	Spare Weatherized AC Connector ; 4-pin AC connector

PLEASE NOTE: When ordering you must specify the destination region by indicating -US, -WW, -IL instead of -XX.

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